BUILDING HEALTHY COMMUNITIES

By

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Have you ever thought about how the way we design and build our communities can affect our health?

You've just seen some examples of both positive and negative community design. You saw parks where people can get regular exercise. You saw sidewalks where people can walk to the places they need to routinely go and keep physically active. But you also saw some dangerous pedestrian crossings where people take their lives in their hands. You saw traffic jams where people may sit for hours becoming angry and breathing dangerous fumes.

I'm Dr. Howard Frumkin, Director of the National Center for Environmental Health and the Agency for Toxic Substances and Disease Registry at the U.S. Centers for Disease Control and Prevention. We're here to talk about how community design can either protect or threaten our health. This is not a new concept.

From the earliest days of our ancestors living in caves, they must have known that some places were healthier than others. A dangerous cave could be a cave with moisture, with too much smoke from fires, or with varmints.

Much later when our ancestors moved into cities and towns, some cities and towns were healthier than others based on the supply of fresh water, treatment of sewage, and the way they handled their waste materials.

Next we came to the industrial revolution a couple of centuries ago, and as factories located in towns, the results were sometimes pretty negative. People found themselves living downwind from the factory emissions which could be toxic to their health.

In the last fifty or sixty years we have seen a new design for communities and it has become typical in many parts of our country. It's a pattern called "urban sprawl." It's based on the ready supply of automobiles. We travel longer distances than our ancestors ever did. We've spread our cities out.

Some of the features of urban sprawl include:
- low density land use where people live on large tracts of land
- low land use mix so that homes are spread apart from workplaces, recreation or schools, meaning that the distances that people have to travel are longer than ever before

- separate communities so that one kind of community is here and another is there
- more automobile infrastructure
- less pedestrian infrastructure.

These and other features of urban sprawl present us with many advantages but also many challenges to our health and well-being. Let's talk about some of those challenges and about how we can learn from them to design and build the healthiest possible communities.

One health issue is physical activity. Imagine a community where all of your destinations are a great distance away, where there are no good sidewalks or bicycle trails, and where there is no mass transit available. You're going to have to drive everywhere for every errand that you run.

Imagine now a different community where the places you have to go—your workplace, your school, the library, the church—are within walking distance. There are attractive, appealing sidewalks that go from your house to those destinations. You'll be able to be physically active as a routine part of your day.

Those are two different approaches to community design—one of which promotes physical activity and one of which does not. That's really important. We know that we are becoming a more sedentary and more overweight society and routine physical activity can help with that.

Not only is physical activity good in terms of weight control, but physical activity also has a variety of other health benefits. It 's protective against heart disease; it's protective against many kinds of cancer. A physically active person is less likely to be depressed; a physically active person—a non-obese person—is less likely to have osteoporosis, gall bladder disease, and strokes. A whole range of conditions is improved if we are physically active, and designing our communities to make us routinely physically active will help us in many ways.

Another feature of community design relevant to our health is the quality of air. All things being equal, the more we drive in a particular city, the more we contribute air pollutants from the tailpipes of our cars to the air of that city. Cities that rely very heavily on driving, cities like my own hometown of Atlanta, are cities that face problems with ozone levels in the air every summer—the warm weather is when ozone tends to form. Now we have some experience here in Atlanta with a solution proving that community design and community transportation practices can improve our health.

During the 1996 Atlanta Summer Olympics, Atlantans were advised not to drive because we expected so much road congestion. Traffic volumes decreased substantially, the ozone levels decreased substantially, and, wouldn't you know it, but within days the number of pediatric admissions to hospitals and visits to emergency rooms for asthma decreased as well. When the Olympics were over, we resumed our habitual driving patterns and the asthma burden increased to its baseline level. If we can manage to drive

less and use transit more, we can improve the respiratory health of children and others who are vulnerable.

A third important health issue that relates to community design is the risk of injuries. Consider car crashes. We lose 40,000 Americans to car crashes every year and that number has remained stubbornly persistent for many years now. If we lost 40,000 people a year to some other kind of tragedy, we would be all over that problem, but we have become accustomed to the problem of car crashes. Being in a car is a relatively dangerous micro-environment to be in. If we can shift from car travel to other modes of travel that are safer, we have every hope that we can prevent some of those needless deaths.

 In addition, some of those car-related deaths are pedestrian fatalities. If we can create good pedestrian infrastructure, separating people who are walking and biking from traffic and getting drivers more accustomed to sharing the roads with walkers and bicyclists, then we can reduce the risk of pedestrian fatalities as well.

Another way in which the way we design and build our communities can affect our health is through social connectedness, through the networks that bind us together as a society, sometimes called a "sense of community."

If we design into our communities places to get together and mix and mingle with each other—good parks, good sidewalks, good gathering places—that helps to build that social connectedness. If we design communities where people can live in one neighborhood throughout their lifespan, allowing them to do what's called "aging in place," then we reduce the need for people to interfere with their social connections by having to move away when they get older and are ready to downsize.

If we reduce our commute time, people have more time available to be engaged in their communities, building a sense of community. Through many mechanisms, a community that is designed and built carefully can improve the sense of community among the people who live there. On the other hand, we know some things that seem to be harmful to do. Long commutes on crowded, congested roads seem to make people angry. One indicator of that problem is road rage—the anxiety, the anger, and in some cases the acts of aggression that follow from excessive exposure to traffic.

Still another way in which community design can affect health is indirect, but no less important, and that's through our contributions to climate change. As we drive long distances we burn gasoline. It's a fossil fuel, so it produces carbon dioxide when burned and carbon dioxide is an important contributor to climate change.

In fact, transportation—cars and trucks—contributes about a third of our greenhouse gas emissions in this country. If we can manage to drive a little less through community design, we can decrease our contribution to climate change. And we know that's important because we know that climate change will raise the risk of a number of health problems ranging from severe storms to the spread of infectious diseases.

Finally, the way we design and build our communities can affect our health through the opportunities to have contact with nature. If we build up an area entirely and don't allow any natural settings to remain, people don't have very much access to green spaces and nature.

Now, more and more we are developing health evidence that suggests that contact with nature is a good thing. People find it to be restorative and they find that it makes them feel better. In addition, parks are an opportunity for people to be physically active and to mix with other people—also parts of a healthy, wholesome community.

All of those features of community design can affect our health in many ways, affecting some of the most common and stubborn diseases that we face: heart disease, respiratory disease, cancer and others. That calls on us to design the healthiest and most wholesome communities we can as a way of protecting public health.

Imagine that you're a town planner or a transportation planner, or an architect, or a designer. What principles will you use to create a community that is as healthy as possible for the people who live there? Well, there is a set of principles called "smart growth," sometimes called "traditional neighborhood design," sometimes called "new urbanism." These are terms that overlap with each other and they connote a core set of principles that we increasingly think are good for promoting not only livability, not only pleasant neighborhoods, but also healthy places to live. What are some of those principles?

One is mixed land use. That means that instead of separating residential spaces from commercial spaces from recreational spaces, we put those different land uses closer together. That means that the trip distances that we have to traverse going from home to work or from home to school are shorter. And as trip distances decrease, it becomes more practical and attractive for us to make those trips on foot or on bicycle rather than in cars.

A second and corollary principle is providing transportation alternatives. In addition to building roads, we need to think hard about building bicycle trails, sidewalks, and mass transit so that people have alternatives in their ways to travel.

A third principle is building more density instead of spreading out. Now, too much density is not very appealing to a number of people. Not everybody wants to live in a Manhattan, but it's the right place for some people. More density than we typically have has a lot going for it because with more density we can support mixed land use. With more density we can put more amenities close to where people live, amenities like schools and stores. And that in turn encourages the use of walking and bicycling and transit instead of driving.

Now to make that work we need a fourth principle which is pedestrian and bicycle infrastructure. That means sidewalks and bike paths that are safe and attractive, even seductive so that people really want to get onto them and use them.

It is very important to think about affordable housing as we design and build healthy communities. You cannot have healthy housing for all without having affordable housing for all. Some of the most attractive and appealing walkable neighborhoods that we have seen built in recent years are so desirable that the home prices rise, putting them out of reach for many people. So we need a range of housing options so that people across the income spectrum can afford to choose to live in walkable communities.

Still another principle of healthy community design is to have community centers, sometimes called "town centers" or "activity centers." These are the neighborhood centers where the community gets together—where you do your shopping, go to a movie, go to church, run your errands. If there are strong community centers, people tend to walk to them and congregate in them and that reduces the amount of driving, reduces the trip distances, keeps people more physically active, and keeps the community more vibrant.

Finally an important design principle is to preserve access to green space and parks. People love places like that—contact with nature is a desirable thing. Parks offer people the opportunity to be physically active for recreation, to relax and enjoy the outdoors, or to meet and mingle with each other. Parks are very important parts of a healthy community.

What's the bottom line? We all have the opportunity to affect the design of the communities in which we live, and if we understand that community design is an important determinant of our health, then we can think hard about the way we design our communities to make them as healthy as they can be. There is a good news story here: the very same interventions that are helpful in terms of livable communities are also environmentally sound. They are healthy and make good economic sense. Not only that, the very same interventions that cause us to be physically active and protect our cardiovascular health also protect us from respiratory hazards because there is less driving. They protect us from injury risks; they build a sense of community; they help us address climate change challenges. In fact, there are synergies, there are multiple co-benefits, from the very same set of community design principles and that is a great piece of news.

We need to remember that many of the people who don't think of themselves as health professionals or health advocates really are health professionals. An urban planner, a designer, an architect, a landscape designer can all be part of this great challenge of designing and building healthy, attractive, beautiful communities. We are seeing change around the country. In more and more cities, people who are looking to live healthy lifestyles, sometimes people who are simply fed up with commutes, are choosing instead to live in compact, walkable communities—communities that, according to the emerging health evidence, are some of the healthiest places to live. You can help, whether you are a health professional, an urban planner, a member of a zoning board or a concerned citizen, by encouraging the development of healthy communities, by choosing to live in healthy communities yourself, and by helping to build the knowledge and build the

enthusiasm for healthy community design. We all want to be healthy. We all want to live in attractive, beautiful and wholesome communities. We want to raise our children in communities like that. We want to pass communities like that on to future generations. Thank you for helping.